

Social Robots and Human-Robot Interaction Project

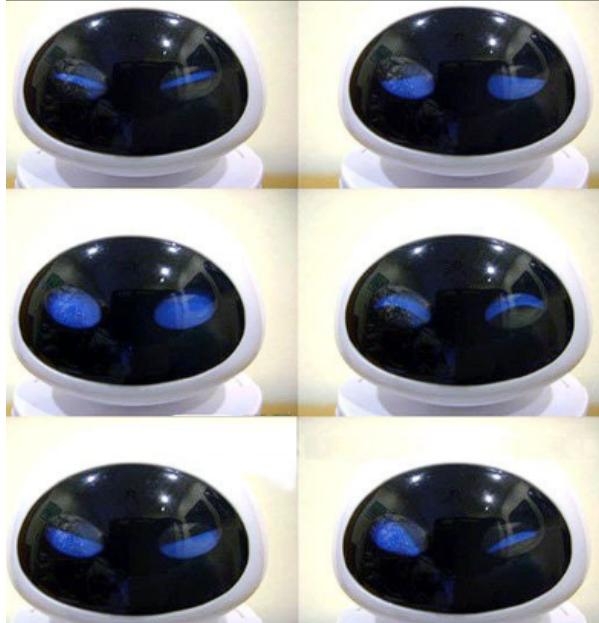
Members:
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Vision and initial idea:

The idea is to have one (or more) of the characters of the book “Os Maias” act through the Elmo robot and to attract people to read the book.

Initial Sketches:

Insert Drawings of eyes for the robot (like Eve from Wall-E) here



Expressions can be extracted from here: <https://github.com/MargaridaEstrela/emoshow>
Have the movement of the robot match the emotion of what it is saying

Storyboarding:

Livro : Asterix e Obelix - Personagem Panoramix



Interaction Step-by-Step:

- Before the interaction : we give the user a spreadsheet with spaces to fill in with information gained from interacting with the robot (both in and out of character).
- During the Interaction : the participant will have 10 minutes to converse with the robot to obtain said information.
- The robot will respond either in character or in the LLM voice, answering truthfully either way.
- After the interaction : The user returns the spreadsheet with the information they got and we ask them about their thoughts.

Information to get :

- **Name**
- **Age**
- **Place of Origin**
- **Profession**
- **Passion**
- **Recipe of the magic potion (might refuse to say)**
- **Who can't drink the potion ?**
- **Wise advice (goodbye)**

Describe potential situations.

It could be used to get people more enthusiastic about reading.

The robot can quiz them

It can make the story feel more immersive

What is the main aspect/characteristic of the robot?

The robot is called Elmo and is a small robot composed of a head on stand. This head can turn and has a screen as a face which allows for customizable expressions.

The robot has two modes, the “acting” mode and the “research” mode. While in “acting” mode the robot acts as if it was a character of the book, expressing emotions with facial expressions and head movement. While in “research” mode the robot answers the users questions more coldly and directly.

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How to test the impact of the idea?:

We want to hear the opinions of many users, having read the book or not, to get a good understanding of the accuracy and impact of our robot.

Compare the emotional response of the user depending on the mode

Research question(s):

General questions:

- Did you notice a difference between the two different modes? If so then how were they different?
- Was there something you felt was missing that would help you interact better with the robot?

If the user has read the book:

- Did you feel like the character was played faithfully and accurately?

If the user hasn't read the book:

- What was your impression of the character portrayed?
- Would using this robot help motivate you to read the book?

How ?

Using a LIKERT scale from 1 to 5 (universal standard without a middle ground)

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Robot to be used: Elmo

Technical Characteristics/Videos:

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Study: Research Questions & Hypotheses

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Experimental study plan
